

REMARKS

The present Amendment amends claims 1, 2, 5, 6, 8, 9 and 11, and cancels claims 4 and 10. Therefore, the present application has pending claims 1, 2, 5, 6 and 8, 9 and 11.

The Examiner is respectfully requested to contact Applicants' Attorney, the undersigned, by telephone so as to discuss the outstanding issues of the present application prior to examination.

Claims 2 and 6 stand rejected under 35 USC §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as their invention. Various amendments were made throughout claims 2 and 6 to bring them into conformity with the requirements of 35 USC §112, second paragraph. Therefore, this rejection with respect to claims 2 and 6 is overcome and should be withdrawn.

Specifically, amendments were made throughout claims 2 and 6 to overcome the objections noted by the Examiner in the Office Action.

Claims 1, 2, 4, 6 and 8-11 stand rejected under 35 USC §102(b) as being anticipated by Hilchenbach (article entitled "Observations on the Real-World Implementation of Role-Based Access Control"); claim 2 stands rejected under 35 USC §103(a) as being unpatentable over Hilchenbach in view of Jensen (article entitled "Transaction Timestamping in (Temporal) Databases") and claim 5 stands rejected under 35 USC §103(a) as being unpatentable over Hilchenbach in view of Prakash (U.S. Patent Application Publication No. 2005/0165868). As indicated above, claims 4 and 10 were

canceled. Therefore, the 35 USC §102(b) rejection of claims 4 and 10 is rendered moot.

These rejections with respect to the remaining claims are traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1, 2, 5, 6, 8, 9 and 11 are not taught or suggested by Hilchenbach, Jensen or Prakash whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to the claims so as to more clearly describe features of the present invention. Particularly, amendments were made to more clearly describe that the present invention is directed to database management method, apparatus and program as recited in the claims.

The present invention as recited in the claims provides a database management method, apparatus and program for managing a database including a table. The database management method according to the present invention includes a step of entering a database definition request, which specifies a database and access attribute information relating to the database. The access attribute information includes tamper proof information regarding the table included in the database for protecting the database including the table from being falsely or erroneously updated. The tamper proof information defines whether the table is associated with an insert-only attribute which indicates that the table can not be updated, row deletion prohibiting period information which indicates a time period during which a

row of the table can not be deleted, and row insertion date and time holding information which indicates the date and time a row is inserted into the table.

Further, the database management method according to the present invention includes steps of if the table is associated with the insert-only attribute, authorizing data insertion and access to data in the table of said database and not authorizing update of the table, if the table is associated with the insert-only attribute and the row deletion prohibiting period information, authorizing deletion of a row of the table of the database provided the time period during which the row of the table can not be deleted has expired, if the table is associated with the insert-only attribute and said row insertion date and time holding information, storing date and time information indicating the date and time a row is inserted into the table of said database; and disabling change of the insert-only attribute after the insert-only attribute is specified. As per the present invention the insert-only attribute cannot be changed other than by a manager of an upper database level.

The above described features of the present invention, now more clearly recited in the claims, are not taught or suggested by any of the references of record, particularly Hilchenbach, Jensen or Prakash whether taken individually or in combination with each other.

Hilchenbach discloses on page 5 thereof the use of "security-relevant attributes" of individuals using a database in a system which provides, for example, banking services. Hilchenbach teaches that the tellers in a banking system are each assigned a "probation period" during which the teller can not update a particular dataset.

However, this teaching of Hilchenbach is concerned with security levels of individuals not of the database or parts of the database itself no matter who the user is as in the present invention. According to the present invention the insert-only attribute indicates that the table can not be updated and once associated with a table, change of the insert-only attribute is disabled after the insert-only attribute is specified and the insert-only attribute cannot be changed other than by a manager of an upper database level. Thus, the present invention is concerned with access security of the database itself no matter who the user is. Such features are not taught or suggested by Hilchenbach.

Further, the present invention provides row deletion prohibiting period information which indicates a time period during which a row of the table can not be deleted, and row insertion date and time holding information which indicates the date and time a row is inserted into the table. Such features are not taught or suggested by Hilchenbach. As per the present invention the insert-only attribute, row deletion prohibiting period information and row insertion date and time holding information are used in various processings to control access and particular types of operations including updating and inserting to the table of the database. Such features are not taught or suggested by Hilchenbach.

Thus, Hilchenbach fails to teach or suggest that the access attribute information includes tamper proof information regarding the table included in the database for protecting the database including the table from being falsely or erroneously updated and that the tamper proof information defines whether the table is associated with an insert-only attribute which indicates that the

table can not be updated, row deletion prohibiting period information which indicates a time period during which a row of the table can not be deleted, and row insertion date and time holding information which indicates the date and time a row is inserted into the table as recited in the claims.

Further Hilchenbach fails to teach or suggest that if the table is associated with the insert-only attribute, authorizing data insertion and access to data in the table of said database and not authorizing update of the table, if the table is associated with the insert-only attribute and the row deletion prohibiting period information, authorizing deletion of a row of the table of the database provided the time period during which the row of the table can not be deleted has expired, if the table is associated with the insert-only attribute and said row insertion date and time holding information, storing date and time information indicating the date and time a row is inserted into the table of said database as recited in the claims.

Still further Hilchenbach fails to teach or suggest disabling change of the insert-only attribute after the insert-only attribute is specified and that the insert-only attribute cannot be changed other than by a manager of an upper database level as recited in the claims.

Therefore, Hilchenbach fails to teach or suggest the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §102(b) rejection of claims 1, 2, 6, 8, 9 and 11 as being unpatentable over Hilchenbach is respectfully requested.

As is clear from the above, the present invention as recited in the claims provides numerous features which are not taught or suggested by any

of the references of record whether taken individually or in combination with each other. Particularly, the above described features of the present invention are not taught or suggested by Hilchenbach. The deficiencies of Hilchenbach are not supplied by Jensen or Prakash. Thus, Hilchenbach, Jensen or Prakash whether taken individually or in combination with each other as suggested by the Examiner in the Office Action still fail to teach or suggest the features of the present invention as now recited in the claims.

Therefore, Hilchenbach taken in combination with one or more of Jensen and Prakash still fail to teach or suggest the features of the present invention as now recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claim 2 as being unpatentable over Hilchenbach in view of Jensen; and the 35 USC §103(a) rejection of claims 5 as being unpatentable over Hilchenbach in view of Prakash is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1, 2, 4-6 and 8-11.

In view of the foregoing amendments and remarks, applicants submit that claims 1, 2, 5, 6 and 8, 9 and 11 are in condition for allowance. Accordingly, early allowance of claims 1, 2, 5, 6 and 8, 9 and 11 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any

overpayment of fees, to the deposit account of MATTINGLY, STANGER,
MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (500.42888X00).

Respectfully submitted,

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